Post-syntactic excorporation in realizational morphology, evidence from Breton

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Post-syntactic excorporation in realizational morphology:
Evidence from Breton*

I investigate a Breton paradigm where excorporation takes place from morphological amalgams such as inflected lexical verbs. I propose that Breton analytic structures with auxiliation in 'do' illustrate a case of excorporation outside of syntax, in realizational morphology. The distribution of Breton excorporation is directly dependent on the output of the syntactic module : word order. The trigger for excorporation, *Late Expletive Insertion Trigger*, is itself at the interface, after syntax and before phonology. Excorporation out of the inflected head asks for repair strategies in order to pass the *Stray Affix Filter* : 'do' support insertion leads to regular analytic structures in 'do' (*to.know do.1SG*, 'I know'). Another last resort strategy is to pronounce the lower copy of the lexical verb, which leads to doubling structures (*to.know know.1SG*, 'I know'). Idiosyncrasy of the latter confirms that repairs of excorporation are not syntactic.

1. Post-syntactic excorporation

Since the 80's, excorporation of syntactic material from within a complex head is ruled out at the level of syntax in terms of a ban on word-internal traces (Baker 1988: 73), or ensured by a *Head Opacity Condition* which stipulates that the internal structure of X° categories is opaque to move-α (Ouhalla 1988:15). Roberts (1991:212) opposed this view and noted that banning excorporation from syntax could be too strong: clitic climbing and verb-raising might provide evidence for successive head-incorporation and excorporation. He proposed that excorporation of a left-adjuncted head could be manifested by clitic climbing as exemplified in (1). Excorporation from the host of an adjunction could also be manifested by verb raising in Germanic V2 environment: in (2), successive raising of the verbal heads have created a verbal complex *had - willen - bellen*, out of which *had* alone is selected by the tense/agreement morphology in I. Movement from within the verbal complex leads to verb-second word order.[1]

(1) **La$_3$** volevo [***t$_2$*** chiamare] ***t$_1$*** ieri. *Italian,* Roberts (1991)
her I.wanted to.call yesterday
'Yesterday I wanted to call her up.'

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Abbreviations: R marks the pre-Tense particle, the '*rannig-verb*' that appears (syntactically at least) before all inflected verbs (Fin head in the left periphery, cf. Jouitteau 2005). In the examples translations, small caps signal informational salience. OBL = oblique ; POSS = possessive, PRT=particle, DIM = diminutive, PAST = past.

[1] Twenty years of literature has explored the categorical status of clitics since Roberts (1991)'s suggestion that clitic climbing illustrates excorporation. I leave here this question aside, and concentrate in this paper on verbal complexes, where the moved element is the host of previous incorporation.

(2) Gisteren **had**$_z$ ik [mijn vriendin op t_i] [t_z [willen bellen$_i$]]. *Dutch*, Roberts (1991)
yesterday had I my girlfriend up want call
'Yesterday I wanted to call my girlfriend up.'

Note that deriving verb-raising in (2) by means of excorporation implies that all other things being equal, excorporation has to be favoured over pied-piping: the Germanic verbal complexes as in (2) indeed never move in the V2 position as a cluster. Watanabe (1993) and Bošković (2001) have motivated this preference in terms of economy: pied-piping is postulated to be less economical than excorporation.
The hypothesis that excorporation is a free syntactic process asks for an accurate restriction. Roberts (1991) states that excorporation is impossible in "cases where incorporation results in a visible amalgam of the two heads (such as standard cases of noun incorporation, or V-to-I movement where V "picks up" tense and agreement marking)". Roberts's technical solution obtains this restriction by proposing that a complex head is formed during the derivation by an *in situ* substitution process, after which no further excorporation is allowed. The potential incorporation host morphologically subcategorizes for the incorporee. As a function of the lexical properties of the incorporation host, a structural slot is created for the incorporee at D-Structure. When the host does not select for the incorporated verbal complex, no substitution arises, and excorporation is made available like in (2).[2]
Llinas i Grau (1991) showed that Roberts (1991) mechanism had to be adapted in order to be able to block excorporation even when no 'morphological amalgam' results from incorporation. Catalan aspectual and epistemic auxiliaries show 'affix-like' properties with respect to their main verb: any attempt to separate the two by adverb intrusion, ellipsis or movement into a Q head in the left periphery in (3) fails. Aspectual and epistemic auxiliaries plausibly form a complex head at some level, and the ungrammaticality of excorporation in its prototypical context in (3)c. has to be both obtained and explained.

(3)a. L'Aina [**va** (*sempre) **mirar**] el cel.
the-Aina PAST always look the sky
'Aina (always) looked at the sky.'
b. * Crèiem que [**miraria el cel**] $_i$ però mirar no el [**va** t_i]
thought-1PL that would-look the sky but look not it PAST
c. * **Va**$_i$ l'Aina [t_i **mirar**] el cel?
PAST the-Aina look the sky
'Did the Aina look at the sky?' *Catalan,* Llinas i Grau (1991)

A line of research for the restriction of excorporation is to postulate a Filter on the output of syntax in the route to PF.[3] In this view, the realizational interface takes the burden of sorting out structures that can have a realization, and structures that can not. All Catalan aspectual and epistemic auxiliaries showing 'affix-like' properties are monosyllabic and are plausibly phonologically deficient. If so, the data in (3) can be accounted for by a filter on the pronunciation interface, in a way similar to a morphological ban on affix-stranding like the *Stray Affix Filter* (4) (see Baker 1988, Lasnik 1981, 1995). Bošković (2001) similarly resorts to 'phonological deficiency' in his formulation of *The Excorporation Condition* in (5), meant

[2] Koopman (1994, 1995) proposes to restrict excorporation with respect to the excorporating element. In all cases of complex adjunction structures, only the host can excorporate. The technical solution at the time was that the projection of a given head acts as a barrier for the adjoined elements inside a complex head.
[3] Some authors propose that excorporation movements arise at the Interpretation level (see Kitagawa 1986, Guasti 1991, Hoshi 1994 and references therein). I disregard here this possibility as I am interested by overt potential excorporation case.

to ensure pied-piping of Slavic clitics up (or next) to the clitic second position, or the stranding of English negation in (6).

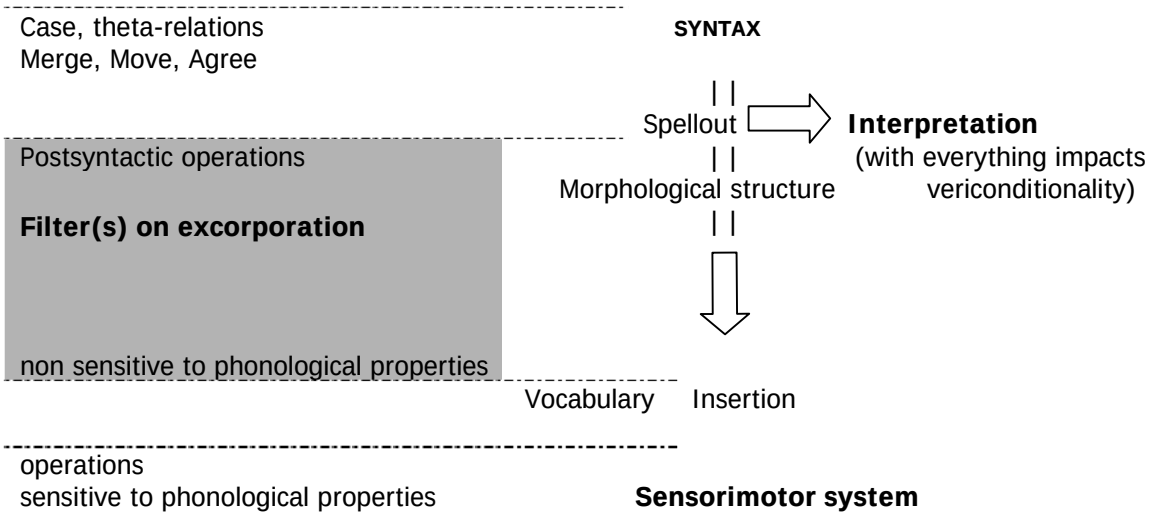
(4) *Stray Affix Filter* (Baker 1988)
A bound morpheme must combine with a stem under a common head node *before pronunciation rules apply.*

(5) *The Excorporation Condition* Bošković (2001:201)
A phonologically non-deficient element Y cannot excorporate out of a complex X°-element W if W contains phonologically deficient element.

(6) Can (n't / *not) John (*n't / not) go there? Bošković (2001:201)

The theoretical danger with interface filters is that of circularity: morphemes that block excorporation are stipulated to be deficient in some way, their deficiency being evidenced by … their resistance to excorporation. In this article, I address this challenge and explore the straightforward predictions that the encapsulation of modules makes.
In a T model as in (7), compatible with Distributed Morphology, if a given operation is post-syntactic, it should have the following properties: (i) no impact on canonical syntactic operations such as feature checking operations like syntactic agreement, (ii) complete invisibility for the interpretative module, (iii) sensitivity to the output of syntax (word order), and (iv) blindness to phonological properties.

(7)



The module at which the filter on excorporation operates is a first question. A second question is the level at which last-resort repair strategies can be operated. Llinas i Grau (1991 :144) notices that the ban on excorporation can be repaired in Catalan, provided the language provides a dummy 'do' auxiliary to be inserted as in (8)a. The last-resort dimension of 'do' insertion is demonstrated by the fact that verbs that do not form a complex with their main verb can only marginally receive *fer* insertion as in (8)b. [4]

(8) a. Ho **va** *fer* el Joan de **divorciar** -se? *Catalan,* Llinas i Grau (1991)
it PAST-do the John of to.divorce-PRON

[4] The 'do' insertion repair strategy is a counterexample to *The Excorporation Condition*, but satisfies the *Stray affix Filter*.

'Did Joan divorce?'

b. Ho **va** **prometre** (*?*fer*) en Joan de divorciar -se?
It PAST promise the Joan of to.divorce- PRON
'Did Joan promise to divorce?'

The hypothesis that 'do' support is operated in syntax would trigger different problems. First, it is not clear how two last resort strategies, pied-piping and dummy 'do' insertion, could find themselves in competition with one another internally to the same module. What would favor one over the other? Second, the hypothesis that 'do' support is operated in syntax triggers a major look-ahead problem if the motivation for its insertion had to be a consecutive interface filter. This suggests that 'do' insertion is also a post-syntactic operation.
So what exactly restricts it at this post-syntactic level? It is not the case that in languages whose morphology provides a dummy 'do', any verbal complex head can appear splitted into two (or more), with 'do' support insertion saving the bound morpheme(s). I summarize the main questions to be explored in (9) below:

(9) a. What is the correct crosslinguistic generalization on possible excorporation processes?
b. In what module is excorporation realized?
c. In what module is excorporation restricted?
d. In what module are repair strategies, like 'do' insertion, realized?

The Breton data is of great interest in this inquiry. In contrast with the generalization widely assumed since Roberts (1991), Breton presents a case of excorporation from a morphological amalgam of a lexical verb and its inflexional morphemes. Breton has analytic constructions that make use of a 'do' auxiliary as in (1)a'. I will argue that (1)a' is a case of excorporation as in (1)a. In (1), the two verbal occurrences are phonologically distinct, and appear in the relative [V^{INF} - T] order. They are separated by the *rannig*, noted 'R'. This particle is a realization of the Fin Head on which the tensed element incorporates (Jouitteau 2005).

(10) a. **V** [$_{FINP}$ R **[(~~V~~ /do).T.AGR]** [$_{vP}$ ~~S~~ ~~V~~ PP]

a'. **Mont** a **ran** d' ar jardin.
go R do.1SG P DET garden
'I am going into the garden.'
Standard Breton

b. **V** [$_{FINP}$ R **[V.T.AGR]** [$_{vP}$ ~~S~~ ~~V~~ PP]

b'. **Mont** a **yan** d' ar jardin.
go R go.1SG P DET garden
'I am going into the garden.'
Quimperlé Breton

Interestingly, the Breton paradigm will provide solid arguments that the excorporation is a post-syntactic operation. First, the trigger for excorporation is sensitive to the word order output of syntax (property iii). Another argument comes from paradigms of doubling like in as in (1)b'. An alternative to 'do' last resort insertion is to pronounce the lower copy of the excorporated verb, leading to verb doubling structures. The lexical verb in (1b) has two occurrences, without the theta-criterion to impose multiplication of the arguments (property ii). Crucially for my proposal that excorporation arises out of the syntactic module, doubling structures like (1b) are idiosyncratically restricted to a list of verbs that do not form a syntactic class. Idiosyncrasy of verb doubling is a major argument that it does not arise in syntax, but in a module like morphology where idiosyncrasy can be handled.

I will first present in details the analytic structure that arises from excorporation with 'do' support. Its syntactic properties will design a sharp contrast with focalization VP structures, as

well as with the paradigms of participle fronting (so-called 'Long Head Movement' or 'Stylistic Fronting'). Next, I will present the idiosyncratically restricted paradigm of verb-doubling. Any doubling structure has a 'do' support alternative, but a small subset of 'do' support structures are available under doubling.

2. Excorporation with *'do'* support

Breton, the Modern Continental Celtic language, displays analytic constructions for tensed verbs (henceforth ACs). In the most common case, an infinitive verbal form precedes a semantically dummy auxiliary that bears the tense and subject agreement markers. This analytic construction with *ober*, 'do' is very productive in Standard Breton and in all dialects.

(11) **Koll** a rafen _ talvoudegezh va bilhed hent-houarn.
loose R would.do.1SG value my ticket train
'I would loose the value of my train ticket.' *Breton Treger,* ar Barzhig (1976:10)

(12) **Ober** a ray _ glao a-raog an noz
do R do.FUT rain before DET night
'It will rain before the night.' *Breton Kerne,* Trépos (2001:438)

(13) **Koéh** e hras _ ar benneu hé deuhlin (…)
fall R did on ends POSS dual.knee
'She fell on her knees.' *Breton Gwened*, Guillevic et Le Goff (1986:161)

This auxiliary means 'to do' in isolation, but its semantic import in the construction is null, and the sentence as a whole is fully equivalent to the synthetic constructions in (14).

(14) a. **Bez**' ez **an** d' ar jardin.
EXPL R go.1SG P DET garden
'I am going into the garden.'
Western Breton

b. [**D'ar jardin**] ez **an** _ .
P DET garden R go.1SG
'I am going INTO THE GARDEN.'
Standard Breton

2.1. Infinitive head fronting syntactic properties

Breton is a 'linear V2' language (Borsley and Kathol 2000, Jouitteau 2009). The *Late Expletive Insertion Trigger* (LEIT) imposes that at least one element, head or XP, precedes the inflected element (Jouitteau 2005, 2007). LEIT, as defined in (15), is the unique motivation for expletive insertion in (14)a, and is accidentally satisfied in (14)b by a focalization pre-Tense movement of the PP. Verbal head fronting with 'do' has the syntactic properties listed in (16). All properties follow if we assume that excorporation answers the same trigger as the merge of an expletive.

(15) *Late Expletive Insertion Trigger*
LEIT is a pre-PF and postsyntactic requirement that bans Tense-first orders (or Subject-AGR first).
As a last resort, it either merges an expletive or attracts the closest element into the pre-Tense position.
LEIT effects are invisible for the interpretative module

(16) *Infinitive head fronting properties*

i. it is restricted to matrix of tensed domains.
ii. it is neutral in terms of information packaging.
iii. it is fully productive (minor some compounds of 'be')
iv. verbal movement is ultra local.
v. the infinitive head with its potential clitics is moved alone.
vi. movement violates the syntactic ban on excorporation
vii. is restricted to [VINF-do] order.

I propose that excorporation in analytic tenses is uniquely triggered by the language particular need to meet obligatory exponence in the pre-tense position. Verbal head fronting with auxiliary *ober*, 'do' happens only in environments where V2 is the canonical word order, hence the restriction to matrices of tensed domains **(i)**, or its ban from the canonically verb initial imperative mode (Ernault 1888 :247). Verbal head fronting is never required when a pre-Tense A-bar material accidentally satisfies LEIT in the core left periphery. In terms of information packaging, Stephens (1982 :114) qualifies verbal head-initial structures as 'neutral', which is also Schafer (1997)'s conclusion after a Modern Breton corpus study. Following Vallduvi (1995)'s terminology, Shafer states that verbal head fronting appears in 'all-focus' and 'focus-tail' sentences **(ii)**. In the grammars from the first half of the XXst century, analytic structures are often said to create emphasis, without further precisions on the type of emphasis produced (see for example Leclerc 1986:63,2°, Kervella 1995:§1997). To my knowledge, contemporary speakers of Breton do not use analytic structures in 'do' for emphasis at all, and they are used for the same readings on the verb as synthetic ones. They appear in idioms chunks as in (17):

(17) a. Ober a rin ma zeiz posubl.
to.do R do.INF my seven possibles
'I will do my best.' Le Berre and Le Dû, (1999:43)
b. Diwada rahe he begell ma n' ahe ket.
to.bleed do.COND.3SG her belly-button if NEG go.COND.3SG NEG
'She has a violent desire to go.' Le Berre and Le Dû, (1999:59)

The restriction to flat structures in terms of information packaging directly follow from the last resort dimension of verbal head fronting: whenever an element undergoes informational salience in Breton, it has to occupy a place in the A-bar field and consequently automatically satisfy LEIT, suppressing the trigger for excorporation. Only very high elements in the left periphery that never interfere with V2 orders, like hanging topics (inducing *as for* readings), scenic adverbs, Q particles, pragmatic connectors (type 'but'), and all complementizers prototypical of parataxis cases (*la* in Central Breton, *kar*, 'because' in all dialects, sometimes *ha*…) can be found before ACs in 'do' [5]. The last resort dimension of verbal head fronting is further underlined by its mutual exclusiveness with any other element brought in the pre-Tense area by the numeration, as the negation C head in (18). Any other expletive strategy also logically bans it (19).

(18) * **Koll** *ne* **reas** ket ar martolod _ e gasketenn.
lose NEG did.3SG NEG DET sailor his cap
'The sailor didn't lose his cap.' *Breton Treger,* Stephens (1982 :113)

(19) * *Bez* **koll** a **reas** ar martolod _ e gasketenn

[5] See Jouitteau (2005:chap2) for a detailed analysis of the Breton left periphery.

EXPL lose R did.3SG DET sailor his cap
'The sailor did lose/lost his cap.'

LEIT last resort verbal head fronting is fully productive minor the verb 'be' and its compounds **(iii)**. The verb *bezañ/bout*, 'to be', is uniformly rejected, as well as the synthetic verb *kaout*, 'to have', a verbal compound of the verb *bezañ/bout*, 'to be' (Kervella 1995 :§245(bis)), Jouitteau and Rezac 2006, 2008, 2009) as checked in (20) [6]. The analytic variety of the verb 'have', still in use in Gwened, can [7]. Ploneis (1983) signals in Berrien another verb that fails to be auxiliated with *ober,* 'do', that also contains the stem of *bezañ/bout*, 'to be': the verb *gouzout*, 'to know'. For Grégoire de Rostrenen (1795:97) and Trépos (2001:438), the restriction extends to all state verbs. However, ACs are easily found with verbs like *seblantout*, 'to seem'; *chom*, 'to stay'; *dont da vezañ*, 'to become', or *tremen evit*, 'to pass for being'. The interpretation properties of the dummy auxiliary may have evolved over time, leading to these variations. Another LEIT signature is the ultralocality of verbal head movement (Holmberg 2000, Jouitteau 2005, 2007). No verb fronting is ever found long distance (21).

(20) * **Kaout** a **ran** un oto.
have R do.1SG a car D.L *Quimperlé*, S.B *Callac*
'I have a car.'

(21) * **Livañ** [FinP a soñj da Anna [FinP e lare Paol [FinP '**raio** Nina an daol.
Paint.INF R think P Anna R say Paul R do.FUT.3SG Nina the table
'Anna thinks that Paol said that Nina will paint the table.'

Properties (i-v), are known in the Breton literature as prototypical of the paradigm of 'Long Head Movement' (Stephens 1982, Borsley, Rivero and Stephens 1996, Schafer 1994, 1997, Borsley and Kathol 2000), 'Long Verb Movement' (Roberts 2005:124) or 'Stylistic Fronting' (Holmberg 2005, Jouitteau 2005, 2007). My proposal here implies a new approach to these non-finite verbal fronting paradigms. Like previous approaches, I conflate analytic constructions in 'do' and past-participles frontings in that they are last resort answers to the same requirement (here LEIT). Contrary to previous approaches, I state however that they consist of two different last resort operations: past-participle fronting resorts to expletive movement across the auxiliary 'have', and analytic structures in 'do' resort to excorporation from the inflected verbal head. The difference between the two constructions is empirically grounded by the properties **(vi-vii)**.
First, following Jouitteau (2005:chap5, 2007), a past-participle can be fronted only if it is the closest post-Tense element, a property easy to test with intervention effects: any element like a subject, a subject oriented adverb, that can intervene between the tensed auxiliary and the past-participle head becomes the favored fronted element. Infinitive head fronting in constructions in 'do' fail to show conclusive intervention effects. It is true that verbal head fronting is over-represented in sentences with a pronominal, and thus non-intervening, subject. This is noted by Le Roux (1957:408) for Middle Breton and by Le Gléau (1973 :45)

[6] Le Roux (1957:413) cites two cases in Middle Breton, but they can be analyzed as pre-Tense expletives before an impersonal form of 'to do'.
[7] Ernault (1890 :473) reports a case of the analytic form of the verb 'have' (x). This Gwened variety of the verb 'have' in Breton is composed of a proclitic oblique argument on the verb 'to be', *bezañ* (cf. Jouitteau et Rezac 2006, 2008, 2009). The 'infinitive' compound is presumably a small clause.
(x) ***hur bout*** *e ramb*, [1PL.OBL be R do.1PL]; 'we have',
hou poud *a ra*, [2PL.OBL be R do.3SG]; 'you have'.

for Modern Breton. The conclusion is however not very strong, if one considers a larger inventory of Modern Breton data. First, Le Gléau (1973) has drawn conclusions from a written corpus study whose speakers are not all natives of the language. Second, infinitive head fronting with null pronouns is merely a *statistical preference*. Le Gléau does not claim, with reason, see (77)b, that [V-'do'-Subject…] orders are ungrammatical. Moreover, the claim that statistical occurrence of a given construction with a null subject is 'preferred' would require a careful checking that null subjects are not independently preferred in the corpus under investigation. I conclude that no convincing intervention effect arises with ACs in 'do'.

Second, the contrast between past-participle fronting and infinitive fronting is easy to show with a replacement test. For any sentence with a verbal head fronting, if the pre-Tense verbal head is replaced by any other pre-Tense element that saturates LEIT (Negation, C head, Focus XP, etc.) the verbal head will appear (i) in the direct post-Tense position if a past-participle or (ii) as a synthetic inflected verb if an infinitive. I believe this prediction to be empirically correct. In particular, ACs in 'do' are restricted to the respective [V - 'do'] order **(property vii)**. The surface order ['do' - V], though licit in Breton, reveals another 'do' auxiliary: a causative semi-auxiliary that selects a small-clause as in (22)a.

(22)a. Me a **ray** **sevel** eun ti.
1SG R do.FUT.3SG build a house
*'I will build a house.'
'I will have a house built.'

b. **Sevel** a **rin** eun ti.
build R do.FUT.1SG a house.
vs. 'I will build a house.'
*' I will have a house built.'

Breton Kerne, Trépos (2001 :249)

If the verbal head moves along to Tense and the Fin head prior to excorporation, the prediction that the infinitive head will never in the post-Tense position is straightforward.

The restriction to [V 'do'] order is not universal, because some cases of [*do* V] order are documented for closely related languages. In Middle Breton, the auxiliary 'do' could precede its infinitive together with a cliticized object (cf. Hemon 2000 :238 note 1). In Cornish, the language most closely related to Breton, [V 'do'] is the canonical order, and the infinitive only exceptionally precedes 'do' (Le Roux 1957 :409, Fleuriot 2001 :21). In Northern Welsh, where the tensed element can stand first in a sentence, ['do' V] order is canonical. My proposal implies that these analytic tenses in other Celtic languages resort to a completely different mechanism.

The excorporation scenario in (1) shows superior to an ultra local movement from the closest post-Tense position, because it offers a simple solution for the absence of [AUX 'do' - V] orders in ACs **(vii)**, and for the contrast with past-participle frontings.

The last argument for the excorporation scenario is the very existence of doubling structures. When two copies of the verb are pronounced, the lower one is not in the direct post-Tense position, but appears as a synthetic inflected verb, in the Tensed complex itself (cf. section 3).

2.2. Identity of the excorporated verb

I propose that the verbal head and its potential clitics excorporate from a syntactically complex head **(vi)**. Excorporation triggers 'do' insertion as a last resort repair strategy in order to pass the *Stray Affix Filter*. In this scenario, the lexical verb consists of the same set of feature as any regular infinitive verb, and is realized as such by post-syntactic morphology.

The first prediction is that the non-inflected verb should show head properties. There are syntactic arguments that the fronted non-tensed verb is merely a syntactic head, and not a larger XP, in analytic tenses **(v)**. Typically, an intransitive verb shows up with an IP stranded internal argument as in (11) and (12). Oblique arguments also remain IP internal as in (13).

Morphologically, the excorporated element looks like a canonical Breton infinitive. Canonical pre-Tense infinitives and post-Tense ones may differ in their phonological realization in several dialects. Excorporated elements are no exception and pattern with other pre-Tense infinitives. Ernault notes that in Little Tréguier, where the verbal ending is obligatory in a post-Tense position, but optional in an analytic structure. Indeed, all infinitives without optional endings noted in Favereau (1997 :§347) for Breton Treger and Gwened appear before a 'do' auxiliary. In Low Kerne, post-Tense infinitives seem to regularly end with the marker *–o* (24), whereas the infinitive in AC shows up with a special ending *–ek* (25)a. (*Saint Mayeux* ; Ernault 1888 :247).

(23) a. gwel(**-et**) / zell(**-ed**) ë rañ
see look R do.1SG
'I see/ I am looking.'

b. red e gwel(**-et**)* / zell(**-ed**)*
?obligatory COP see / look
'One must see/look.'

(24) *Plélanff, Goarec* : 'to wash', *kañ***o** 'to sell', *gwerh***o** 'to shake' : *hæj***ò**
[Le Roux 1924-1953ALBB point 60, maps 286, 295, 311 –diacritics non reported]

(25) a. c'hoarzh**ek** a ra
laugh R do.3SG
'He laughs.'

b. labour**ek** a zo red _ .
work R COP.3SG obligatory
'One must work.'
litt. 'It is obligatory to work.'

The key of the pre-Tense/post-Tense asymmetry in the spell-out of verbs is likely to be found in Breton accentuation rules, and in the fact that pre-Tense items always have a following vowel available for syllabification: the *rannig* (R).
One could try to push that the above data suggests an asymmetry in Breton between verbal roots (pre-Tense) and regularly derived infinitives (prototypically post-Tense). However, this would predict that infinitive verbs that are not brought in the pre-Tense position by excorporation should show regular morphology. This is contrary to facts in (25)b, where the verbal ending *–ek* appears. The asymmetry thus seems to stand on the pre-Tense/post-Tense partition, and not on the root/infinitive one, favoring a phonological reduction scenario.
Finally, the excorporation scenario predicts that the infinitive should appear only with clitics that can also appear with synthetic verbs. The only elements that can appear with the excorporated head are object and reflexive proclitics and a restricted set of small adverbs (we come back to clitics in section 4).

(26) a. **Anavezout mat** a ran ar wask-se…
to.know well R do.1SG the torment-here
'I know this torment well.' *Breton*, Angela Duval, 'Glac'har'

b. Anavezout (*dre eñvor) a ran (mat) ar wask-se… Jouitteau (2005:400)

The excorporated infinitive does not seem limited in any of the morphological operations available to Breton infinitive roots. In the opposite, morphological operations banned for a synthetic verb are allowed on the excorporated infinitive head. In (27)a, the infinitival head illustrates a morphological operation available for infinitives: a reduplication whose second member shows a diminutive suffix. This morphological operation obtains an attenuative meaning. No such form is ever allowed on a tensed verb. This fact can be accommodated if the rule that bans diminutive suffixes on tensed verbs is located on the road to PF.

(27)a. **Bevañ-bevaik** a rae, kalonek atav, gant Debauvais e penn (...)

to.live-live.DIM R did.3SG courageous always with Debauvais P head
'It was struggling along, courageous as always, with Debauvais in power.'
Standard Breton, Denez (1993:17)

b. * Bez' e vevañ-vev**aig**e…
EXPL R to.live-live.DIM.3SG.IMP

2.3. Setting aside *v*P focalisation

We are now equipped with a reasonable battery of syntactic tests in order to set aside another construction that makes use a dummy auxiliary 'do': the *v*P focalization construction as illustrated in (28), where an entire extended *v*P structure has been fronted into a pre-Tense focus position in the left periphery. Stephens (1982 :99) distinguishes this construction in stressing the 'anaphoric properties' of its 'do' auxiliary. This focalization construction has characteristic syntactic properties that sharply distinguish it from verbal head fronting in (1)a.[8]

(28) [$_{FOC}$ [$_{vP}$ PRO$_i$ **Dimeziñ gant ma merc'h]** ne ri$_i$ ket t$_{vP}$.
marry with my daughter NEG do.FUT.2SG NEG
'You won't MARRY MY DAUGHTER.'
Breton Treger, Le Lay (1925), cited in Le Gléau (1973:45)

(29) *vP focalization properties*
i. no restriction to matrix of tensed domains (31).
ii. it is absolutely restricted to focalization readings (sometimes contrastive).
iii. it is fully productive for all *v*Ps
iv. movement is not local; see (28), (30).
v. the infinitive head is moved inside a large constituent (28).
vi. involves no violation of the head movement constraint.
vii. is not restricted to [VINF-do] order; see (31).
viii. It never has a doubling counterpart.

(30) [$_{vP}$ PRO$_i$ **Bale**] ne gredan ket **a rafe** t$_{vP}$ ken.
walk NEG believe.1SG NEG R do.COND plus
'I don't think he would WALK anymore.' *Breton Treger,* (Gros 1984:113)

(31) An eskob$_i$ n' en deveze d'**ober**, a lavare an teodoù flemmus,
DET bishop NEG ®.3SG had P do R said DET tongues caustic
nemet **[**$_{vP}$ PRO$_i$ **lakaat** ur vennigadenn da zivizoù B **]**.
only put DET benediction P words B.
'According to slanderous rumors, all the bishop had to do was to GIVE HIS BENEDICTION TO B'S WORDS.' *Standard Breton,* Dupuy (2007 :16)

The two [VINF-*do*] constructions thus distinguish by the size of the displaced element (X° vs. XP), and consequently by the type of movement it undergoes (ultra-local LEIT movement vs. XP movement). The motivation for movement is also different. In the *v*P focalization case, this motivation is feature checking into the left periphery. Such an A-bar movement automatically satisfies LEIT. As a consequence, *v*P focalization is mutually exclusive with verbal head fronting, because the former satisfies to a rule for which the latter is a last resort

[8] See also Borsley, Rivero and Stephens (1996) for a study of the different 'do' auxiliaries.

strategy. Finally, because head-fronting resorts to excorporation, and *v*P fronting to XP movement, the latter is found with auxiliary compound tenses where the former is ungrammatical. In (32), the auxiliary 'have' did not contain the lexical verb 'to write' at any point in the derivation and excorporation could not lead to the fronting of the infinitive of *skrivañ*, 'to write'.

(32) Skrivañ (d'am breur) am eus graet (* _ d'am breur)
write.INF to my brother R.1SG have done to my brother
'I have written to my brother.' *Treger Breton*, Leclerc (1986:80)

Last contrast, VP focalizations, like other pre-Tense XP focalization strategies, have a salient influence on the French of bilinguals, as in (33)a. Analytic constructions with auxiliation in 'do' have not ((33)b). LEIT effects are correctly predicted to be out in an SVO language like French.

(33) a. [$_{vP}$ Fréquenter des officiers et leurs dames] qu' elle faisait _.
to.see DET officers and their wifes that she did
'She used to see officers and theirs wifes.' *Brest French dialect*, Péron (2001:11)
b. *Fréquenter qu'elle faisait [$_{vP}$ _ des officiers et leurs dames].

Finally, I have to point that cleft structures fail to fit in the V-fronting vs. VP-fronting divide. In (34), the stranded object excludes an analysis in terms of VP-fronting. The lexical verbal head *dallañ* is however separated from the tensed auxiliary by more material than just the rannig. These structures are poorly understood, and I have to set them apart for future work.[9]

(34) **Dallañ** an hini ' reont **an daoulagad** gant o sked (…)
blind DET one COP R do.3PL DET eyes with POSS.3PL light
'They BLIND the eyes with their light. (…)' Denez (1993 :64)

To recapitulate, I have proposed that the analytic structures in 'do' illustrate a case of excorporation out of a morphological amalgam (tensed verb), contra Roberts (1991). This hypothesis correctly predicts that auxiliary compound tenses are not compatible with excorporation (one can excorporate only what is there).
I have shown that AC constructions in 'do' result from a last-resort operation satisfying LEIT, a language particular ban on verb-first orders. This hypothesis accounts for the syntactic properties of verbal head fronting **(i-vi)**, and for the contrasts in distribution with the *v*P focalization strategies, which resort to XP focus movement. The trigger for excorporation is obviously informed of the results of the syntactic output, which suggests that excorporation is a post-syntactic operation. The excorporation hypothesis together with the postulated LEIT trigger also easily derives that the infinitive head in Breton is never found *after* the tensed head of the auxiliary 'do' **(vii)**.
I will now concentrate on the stronger argument in favor of an excorporation hypothesis: the fact that some ACs in 'do' have a doubling counterpart **(viii)**. In doubling examples, the lower copy of the lexical verb strongly suggests that the infinitive fronted element originates from the inflected complex head. The idiosyncrasy of verb-doubling will confirm that excorporation arises in a post-syntactic morphological component.

[9] Productivity of this data also has to be checked. The corpus example in (34) is produced by Per Denez, expert but non-native of the language. I have found no similar example in corpus so far.

3. Excorporation with doubling

In this section, I will show that the syntactic properties of verb doubling Breton paradigms are similar to that of analytic tenses in 'do', minor its idiosyncrasy, and some discourse effect that does not impact its last-resort dimension. Idiosyncrasy of verb-doubling has the major theoretical consequence that doubling can not be operated at the syntactic level. I start by a brief tour of the data.

3.1. Verb doubling as a subcase of AC

Contrary to the AC in 'do' which seems fully productive since Middle Breton, the doubling AC appears later in the language (during XVII°, see Le Roux 1957 :416). Its salient characteristic is to be lexically restricted. Verbs that can double are: *ober*, 'do' (12), *bezañ*, 'be', *rankout*, 'must' (35), *dleout*, 'must', (36), *gallout*, 'can' (37), (38)), *dont*, 'come' (39), *mont* 'go' (40), *gouzout*, 'know' and (41), *kerzhout*, 'walk', *redek*, 'run' (42), and finally *lenn* 'read' (55). Verb doubling is exceptional in corpus, and doublings verbs are not equally found in spontaneous speech. *Gouzout*, 'know' is from far the most commonly heard in Modern Breton, whereas *redek*, 'run', or *lenn*, 'read', are fairly rare.

(35) **rencout** a **rencan** da vont
must.INF R must.1SG P go
'I have to go.' *Breton Quimperlé,* [D.L 03/2009]

(36) **Dleout** a **zlean** ober ma gwele.
must.INF R must.1SG do my bed
'I have to make my bed.' *Breton Quimperlé,* [D.L 03/2009]

(37) **Gallout** a **c'hallfen** lako ma avaloù en douar.
can.INF R can put POSS apple/potato P.DET soil
'I can plant my potatoes.' *Breton Quimperlé,* [D.L 03/2009]

(38) **Gellout** a **c'hell** goro ho bugale ar saout.
can.INF R can .3SG milk poss.2PL children DET cow
'Your children could milk the cow.' *Breton Treger,* Schafer (1997)

(39) **Dont** a **zeuio** re vraz ha re vihan…
come.INF R come.FUT.3SG 3PL big and 3PL small
'The big ones and the small ones will come...' *Breton Leon*, Troude (1886:54)

(40) **Mont** ' ch **i** d' ar gêr !
go.INF R go.2SG P DET house *Low-Tréguier*, collected by Gros 1911 in Trédrez
'Will you go home !' cited in Le Roux (1957 :417)

(41) Met **gouzout** a **ouzont** kavout an dud en-dro goude-se (…)
but know.INF R know.3PL find.INF DET people again after-that
'But they know how to find people after that...' *Breton Kerne,* Bijer (2007 :138)

(42) **Redek** a **redan** bemdez.
run.INF R run.1SG every.day
'I run every day.' *Quimperlé,* [D.L 03/2009]

Verb doubling is a case of excorporation whose last resort for the *Stray Affix Filter* is pronunciation of the lower copy of the excorporated lexical verb. As expected, verb doubling illustrates most of the syntactic properties of AC with 'do'. The contrast lies in productivity and in the impact on information packaging (italics).

(43) *Verbal head doubling properties*
- i. restriction to matrix of tensed domains.
- ii. *it is not neutral in terms of information packaging.*
- iii. *it is lexically restricted*
- iv. verbal movement is ultra local.
- v. the infinitive head is moved alone.
- vi. movement violates the syntactic ban on excorporation
- vii. is restricted to [VINF-do] order.
- viii. *It (always) has a 'do' counterpart*.

Like all LEIT triggered effects, doubling cases are exclusively found in V2 canonical environments. No case of doubling in infinitives, or imperatives ever arises **(i)**. Verbal head doubling is ultra local **(iv)** and does not stand long distance extraction (44). The 'glass ceiling' of the left periphery, above which merged elements do not impact LEIT anymore, contains the same elements as noted above for the AC in 'do'. A case with the complementizer *ha*, 'and', is illustrated in (45) (Bijer 2007 :134), *met/hogen*, 'but', in (41), (46) (or Bijer 2007 :136). Examples in embedded sentences reduce to the parataxis cases like (47).

(44) ***gouzout** *ne gredan ket* a **ouzez** ken.
know NEG know.1SG NEG R know.2SG anymore
'I don't think you know anymore.'

(45) Va breudeur, ur wezenn-fiez, ha **gallout** a **c'hell** reiñ olivez, pe ur winieg fiez?
POSS.1SG brothers DET tree-fig Q can R can give olives or DET vine fig
'My brothers, can a fig tree give olives, or a grapevine figs?'
Testamant Nevez : lizher Jakez 3, Gwilh Ar C'hoad (1893)[10]

(46) *Hogen* **goud' ouzon** ne 'teus ket klasket laza...
but know R know.1SG NEG has.2SG NEG tried kill
'But I know you didn't mean to kill...' *Koatilouri*, Barzhig

(47) … *rak* **gouzout** e **ouie** n' eo ket mont a dont (…) nemetken eo a rafe e genitervez.
because know R knew NEG is NEG go and come only is R do.COND his cousin
'… Because he knew that his cousin would not only go back and forth.'
Breton Kerne, Bijer (2007:156)

Verbal doubling concerns syntactic heads **(v, vi)** as illustrated by the stranded object in (48), and never targets accompanying arguments (49), except incorporated ones (50). The sentence in (51) would be a strong counterexample if it could mean: *He will come home walking*, which it can not, as ungrammaticality of replacement by 'tomorrow' confirms. The verb here is really present twice; with a pre-Tense topicalization of the goal proposition *He will **come** walking* [PP(*in order to*) ***come*** *home*] [11]. Presence of the silent preposition is independently

[10] This translation of the new testament has been written by Gwilh Ar C'hoad in the XIXst century, with consecutive corrections in Modern Breton by Lukaz Bernikod.
[11] Thanks to Denis Pruel for driving my attention on these structures.

revealed by the *e* variant of the rannig, in opposition with examples of doubling that tend to use the *a* variant.

(48) **Goud** a **ouie [_** an tu da chachañ dour war he milin].
to-know R knew the way of pull water on her mill
litt: 'She knew how to pull water for her mill'. *Breton Treger*, Gros (1984:111)

(49) *[**gouzout** *an doare da vont*] a **ouzez**.
know DET reason P go R know.2SG

(50) [**hen gouzout**] a **ouzon**. / [**E lenn**] a lennan
CL.3SG know R know.1SG CL.3SG read R read
'I know it (well).' 'I do read it.' *Quimperlé*, D.L.

(51) [$_{PP}$ **Dont d' ar gêr**] e **teuio** war droad / * warc'hoazh.
P come P DET house R come.FUT P feet / tomorrow
'(In order to) come home, he will come (walking /*tomorrow).'
Quimperlé Breton D.L., *Callac* S.B.

The doubling phenomenon finally parallels the analytic tenses in 'do' in being strictly restricted to precedence of the infinitive form **(vii)**.
I will now turn to an intriguing difference with excorporation saved by 'do' insertion: the verb doubling impact on discourse.

3.2. Information Packaging and last resort

Crosslinguistically, doubling is associated with different types of readings. Kandybowicz (2008 :chap3) distinguishes three of them, to which I add (iv):

(i) *contrastive of topic/focus*
Russian, Hungarian, Korean, Kabiye, Brazilian Sign language,
Biscayan Basque focalization as in (53).
(ii) *emphasis of the 'really V' type*
Haitian, English
(iii) *polarity effects*, that is emphasis on the veracity of the sentence
Mandarin Chinese, Nupe, European Portuguese, French as in (52).
(iv) *hanging topic reading ('as for…')*
Basque topicalization doubling as in (54).

(52) *Pour* **lui prendre la tête,** elle **lui a pris la tête**! *French*
for 3SG.DAT take.INF the head, she 3SG.DAT has taken the head
'She *really* annoyed him/her!'
> pragmatic implication: she showed extensive evidence for this action.

(53) **Juen doie**, ala **etorri dator**, ba? *Biscayan Basque*
go.INF go.3SG or come.INF come.3SG then
' Well, is he leaving (right now) or is he coming? Zuazo (1998:207)

(54) **Hartu** ere **har-tzen** dut erabakia. *Basque*
take also take-IMPF AUX decision
'As for taking, I TAKE my decision.' Hualde & Ortiz (2003:460)

In Breton too, there is a salience effect attached to doubling constructions, which differentiates them with ACs in 'do'. This effect, clearly neither contrastive nor hanging topic, includes *verum focus* and some kind of insistence not reducible to *verum focus*. Grammars are at best allusive, at worst contradictory about it. Ernault (1890 :470) proposes a gradation in insistence : the doubling of *rankout*, 'must', would be a «more energic synonym» of the AC in 'do', itself standing above the synthetic strategy. This contradicts Le Gléau (1973 :46) for which focalized AC in 'do' with semi-auxiliaries like *rankout* are ungrammatical. The pragmatic development of (55) that Herve ar Bihan comments on for a sentence of his father, points toward a *verum focus*, a focalization effect on the veracity of the sentence, suggesting that doubling may even induce different types of readings on the sentence.

(55) **Lenn** a **lennan** !
read R read.1SG
'You see well that I am reading !' Guy ar Bihan, collected by H. ar Bihan.
Pragmatic development: 'You see that I know how to read.'

I have presented two speakers, D.L and S.B., with the corpus example (56) that seemed to me a good candidate for a neutral reading, in order to see if focalization effect is obligatory with verb doubling. The verb 'to know' is a doubling verb for both of the speakers. The context of the sentence ensures that all information of the sentence is new, and that a *verum focus* would be pragmatically strange. Both speakers however noted an emphasis effect (without further explanation on what it consisted of). Emphasis could here bear on (i) the lexical content of the verb, (ii) the sentence as a hole, or (iii) the internal argument of the doubled verb[12].

(56) a. Goude bezañ kimiadet diouzh an daou grennard ha danvez beleg anezho,
after to.be separated P DET 2 adolescent C material priest P.3PL

e kavas d'ar c'harretour en doa gounezet e verenn.
R found P DET carter 3SG had won his lunch

'After he left the two adolescent priests-to-be, the carter found he had won his lunch.'

b. **Gouzout** a **ouie** e oa e bourk ar Pont un ostaleri ma veze selvichet enni
to.know R knew R was P bourg DET Pont DET hostel C was served P.3SGF

sklipoù eus ar c'hentañ. Ha Lorañs mont e-barzh.
tripes P the first & Lorañs enter in

'He knew there was in the town of Pont a hostel that served first class tripes. He went in.'

Breton Kerne, Avel gornôg, Bijer p.165

I leave for here the question of how to properly characterize doubling's impact in semantic terms, and I just take it that it *can* have one and most probably has to, with possible readings that exceed *verum focus*. A much more extensive study, with carefully controlled questionnaires, taking variation into account would be much in need.

[12] Thanks to Alain Rouveret for pointing this possibility.

For now, I will briefly check that the semantic/discourse impact of doubling does not alterate the last resort dimension that allows us to pursue the parallel with ACs in 'do'. If verb doubling has an impact on information packaging, can we still consider it is used as a last resort operation for the satisfaction of LEIT? One could think that the impact of verb doubling on information packaging would impose it in a given numeration. Surprisingly, verb doubling shows all last resort properties of verbal head fronting. Not only does verb doubling appear only in V2 canonical contexts **(i)**, but any independent satisfaction of LEIT renders doubling ungrammatical. Doubling is banned with an embedded C head (57)a, a matrix negation C head (57)b, or a pre-Tense expletive (57)c. This is also the case for any A or A-bar pre-Tense XP.

(57) a. * Na larez ket din *ma* **gouzout** a **oar**…
NEG.IMP tell.2SG NEG P.1SG if know R know.3SG

b. (**n'*) **gouzout** (**n'*) **ouzon** ket. c. (**bez'*) **gouzout** (**bez'*) '**ouzon**.
NEG know NEG know.1SG NEG EXPL know EXPL R know.1SG

It is at first surprising to note that a last resort operation can (have to) impact information packaging. The case has to be apprehended in comparison with another Breton expletive strategy that also can bear on information packaging: the merge of expletive *Bez*, a shortening of the verb *bezañ* 'to be'. In (58)a, the pre-Tense expletive *Bez* is a neutral 'out of the blue', and in (58)b, it can bear *verum focus*. Although *bez* can be found in Western Brittany before all sorts of verbs, it is suggestive that in case the tensed verb is based on the 'be' stem, the paradigm overlaps with verb doubling. [13]

(58) a. **Bez' omp** digemeret en eur zal vraz spontuz.
EXPL are.1PL welcomed in DET room big terrible
'We are welcomed in a very big room.'

b. **Bez' he-deus** da vihanna, tri-ugent metr hed ha tregont metr lehed.
EXPL R.3SGF has P least 3-20 meter long and 30 meter large
'(Indeed) It is at least 60m long and 30 meter large.' Miossec (1981: 7)

The AC in 'do' is also said in Breton Grammars, to have been used as a salience effect on the verb in varieties of the beginning of the XXst century. In modern varieties, this is the case only for doubling structures. Insertion of the auxiliary 'do' crosslinguistically sometimes has to come with an obligatory emphasis effect. Llinas i Grau (1991) notices that *fer* insertion in Catalan as in (8) comes with a special reading: the use of *fer* implies a stronger emphasis on the lexical verb. The same emphasis can be noted in Bizcaian Basque doubling paradigms, both with doubling an 'do' insertion.

My proposal implies that these discourse effects are interpreted in a pragmatic component of interpretation, distinct from semantic interpretation proper. Being operated in a post-syntactic component, *LEIT* last resort strategies should be invisible for the interpretative component of grammar. I consider that the interpretation interface is sensitive only to what can impact the vericonditionality conditions of the sentence. Neither *verum focus* nor its absence ever impacts the vericonditionality conditions of the sentence.

[13] The expletive *bez*' is used with all verbs in Standard Breton. Eastern dialects restrict its usage to co-occurrences with the inflected verb 'be', and thus to verb doubling (cf. see documentation on ARBRES, http://makino.linguist.jussieu.fr/ARBRES/index.php/Bezan_preverbal and references therein).

The crucial fact for my hypothesis is that despite its impact on information packaging, verb-doubling shows the last resort properties prototypical of ACs in 'do'. The main difference between doubling and 'do' insertion thus only lies in the idiosyncrasy of the former.

3.3. Idiosyncrasy of doubling

This section is dedicated to showing that Breton verb doubling is idiosyncratically restricted, and concerns a list of verbs that fail to form a class at the syntactic level. No syntactic reduction of the paradigm is possible. This suggests that doubling is triggered at the very late syntax/morphology interface, and realized in a morphological post-syntactic module. I will proceed by exploring different attempts of syntactic reduction and point where they fail to account for the data.

We saw that for Le Roux (1957 :416), apparition of verbal doubling dates back to the XVII[st] century. Kervella (1995 :§274) poses that all Middle Breton verbs could get inflected in taking their own root as an auxiliary. Ernault (1888 :247) shows in the contrary that the doubling AC was found "only for a small number of verbs, in Modern and Middle Breton". He illustrates with some corpus data, and produces examples that are sensibly similar to those later produced by Hemon (2000:239 note 4) and Le Roux (1957 :416).
Breton grammars vary with respect of the verbs they consider can double. *Gouzout*, 'to know' is the only doubling verb noted by Kervella (1995 :§197), though he dedicated an entire section on conjugations with semi-auxiliaries (§247-253). Gros (1984:94), expert on the Treger dialect, has a very detailed chapter on emphasis by doubling but also cites only 'to know' as a doubling verb. However, as reported in Le Roux (1957), Gros had collected a doubling structure with *mont*, 'to go' in 1911 in Trédrez. Le Roux (1957 : 414), also a Treger Breton speaker, mentioned *gouzout*, 'to know', but also *gallout*, 'can', as did Ernault (1888) that he had read. He further mentions that there are « some others » and cites the data collected by J.Gros with *mont*, 'to go'. Eugène Chalm, from Cap-Sizun (Kerne diaclect), signals verb doubling with *gouzout*, 'to know', *gallout*, 'can' and *rankout*, 'must' (Chalm 2008:45). This structure is absent from a 38 hours of spontaneous speech recording Gwened Breton (*Lorient,* Cheveau 2007). I have established a questionnaire based on these data for two native speakers of Breton, D.L from Quimperlé, and S.B. from Callac. The list of verbs they can double is summarized in the table content below. The right-most column summarizes the double occurrences cases either reported in the descriptive literature, in corpus or reported to me as used by other native speakers.

(59)			D.L Quimperlé	S.B Callac	*reported in the literature*
AUXILIARIES	'be'	*bez(añ)*	√	√	
	'do'	*ober*	√	√	(12)
	'have'	*kaout*	*	*	-
SEMI-AUXILIARIES	'know'	*gouzout*	√	√	(41)
	'can'	*gallout*	√	√	(37),(38),(45)
	'must'	*rankout*	√	*	(35)
	'must'	*dleout*	√	*[14]	(36)
	'look for'	*klask*,	*	*	-
LEXICAL VERBS with homophonous semi-auxiliary	'know'	*gouzout*	√	√	(46),(47),(56)
	'come'	*dont*	√	√	(39)
	'go'	*mont*	√	*	(40)

[14] The speaker hesitates because she thinks she had heard it, but insists she would not use it herself.

	'look for'	*klask*,	*	*	-
LEXICAL VERBS	'run'	*redek*	√	*	[15]
	'walk'	*kerzhout*	-	-	Guy ar Bihan
	'read'	*lenn*	-	-	(55)
	'laugh'	*c'hoarzhiñ*	*	*	-
	'walk'	*bale*	*	*	-
	'danse'	*dañsal*	*	*	-
	'cry'	*leñvañ*	*	*	-
	'cry'	*oueleiñ*	*	*	-

The repartition of doubling verbs resists to any attempt of syntactic reduction to a homogeneous class of verbs.

Let us first examine with care the flexibility in ranking possibilities for auxiliaries because some ranking decisions are analysis dependent. The double occurrences of the verbs *ober*, 'to do' can either resort to doubling or to an AC in 'do' (12). The analysis of doubling cases of *bezañ*, 'to be', could also oscillate between verb doubling and expletive insertion (58)a. Doubling of *kaout*, 'to have', partly depends on the analysis of 'to be'. The paradigm of *kaout* is visibly formed by a morphological compound including 'to be', to a more or less synthetic degree across dialectal variation (cf. Jouitteau & Rezac 2006, 2008, 2009 and references therein). Though doubling is not grammatical with the *kaout* form of the infinitive (60), some dialects would allow *bez* insertion equally before *kaout*, 'to have' and *bezañ*, 'to be' (58). These cases thus could equally 'count' as verb doubling or expletive insertion. The generalization on auxiliary-doubling is quasi entirely analysis dependent. I take these ranking variables into account in the coming discussion.

(60) * **Kaout em eus** un oto / gwelet / riv.
avoir R.1SG ai une voiture / vu / froid
'J 'ai une voiture / j'ai vu / j'ai froid.' D.L., S.B.

As for semi-auxiliaries, some of them can be doubled, but not all of them (61). The list of doubling verbs also contains some lexical verbs. Hervé ar Bihan reports his father used to double the verbs *kerzhout* 'to walk' and *lenn*, 'to read' (55). S.B and D.L both double *gouzout* 'to know' and *dont*, 'to come' in their special and thus lexical interpretation. However, verb doubling is far from extending to all lexical verbs: neither of both speakers can double lexical verbs like *bale*, 'to walk', *c'hoarzhiñ*, 'to laugh', *dañsal*, 'to danse', or finally *leñvañ* (*dourek*)/ *oueleiñ*, 'to cry' :

(61) * **Klask** a **glasko**…
look.for.INF R look.for.3SG
'She will try to…'

(62) * **bale** a **vale**.
walk.INF R walked.3SG.
'He was walking/He walked.'

(63) * **Choarzhiñ** (brav) a **c'hoarzhes**
laugh.INF beautiful R laughs.

[15] I have found *redek a redan*, /to run I run/ for the first time in a written source that I could not find again. I am even unsure if it was Modern or Middle Breton. This is what gave me the idea to test it in Modern Breton with DL and SB.

'You are laughing (a lot) !'

(64) * **Dañsal** a **zansan** ar jabadao.
danse.INF R danse.1SG DET jabadao
'I am dansing the jabadao.'

(65) * **Leñvañ** (dourek) a **leñve** (dourek).
cry.INF (water.adj) R cried.3SG (water.adj)
'He was crying a lot.'

(66) * **Oueleiñ** a **ouelent** gant glac'har.
cry.INF R cry.3SG by pain
'They cried with pain.'

Reduction to the verbal structure seems a hard task: verbs that are semantically similar may still differ in doubling properties for the same speaker: D.L doubles *redek*, 'to run' (42), but not *bale*, 'to walk' (62); and S.B doubles *dont*, 'to come', but not *mont,* 'to go'.
Variation is also dialectal or even idiolectal: D.L from Quimperlé can double the two auxiliaries *rankout* (35)b. and *dleout* (36) 'must', and the two lexical verbs *mont* and *redek*, which is ungrammatical to S.B from Callac (1h23 driving distance). This dialectal or even idiolectal variation is a serious obstacle to any attempt of reduction of verb-doubling to a homogeneous syntactic class.
No morphological particularity either emerges, that would set apart doubling verbs from other verbs. At most, we can note that some infinitival ending for example *–al*, are never present on doubling verbs, but so few verbs do double that it is hardly conclusive. The case of verbs ending in *-out* like *gouzout*, 'to know', must however be discussed. *Gouzout*, 'to know' is from far the verb that doubles the more frequently in modern Breton. When one wonders about the link between *gouzout*, 'to know', and semi-auxiliaries, one can notice it is a compound containing the verb 'to be' (under its *–bout* more ancient form). No reduction of the data is however possible. In Treger Breton like in Léon, the independent form of 'to be' is not *–bout*, like it is in Breton Gwened and Breton Kerne: it evolved in *bezañ* (Hémon 2000 :§139,14). In these dialects, the verb 'to know is arguably not a compound of 'to be' anymore.
It is tentative to try to reduce doubling verbs to the availability of a possible spell-out for the excorporated element, but we know from the fully productive form in 'do' that all verbs do have a spell-out for an excorporated root. It is also tentative to try to reduce doubling verbs to the availability of a possible spell-out for the inflected form, but all verbs have an inflected form in Breton.
Finally, no correlation emerges between doubling verbs and those before which the expletive *Bez'* can be found. Gros (1984:110) notes that *Bez'* is restricted in Breton Treger to the pre-Tense area of *bezañ*, 'to be', *gouzout*, 'to know' and *kaoud*, 'to have'. The first two can double in this dialect, but *kaout* fails to. This hypothesis also would not hold for Standard Breton or Western varieties, where *Bez'* can be used before any lexical verb.
I conclude that the difference between doubling verbs and non-doubling verbs is purely idiosyncratic. Knowing the language requires for one to know, for each verb, if it can be used in doubling constructions or not. Dialects and speakers vary in the list of verbs they treat as doubling verbs.

3.4. A typologically unique situation

Idiosyncrasy of the verbal doubling phenomenon is, as far as I know, unique to Breton. Verb doubling is largely documented over a large set of languages (see Gouget 2008, Kandybowicz 2008 et references therein). Some languages show instances of verb-doubling with two identical occurrences, like in Nupe, Haitian, Fongbe or Mandarin Chinese, Gungbe (67). In all these languages, the two occurrences can appear phonologically identical. In Yoruba (68), the reduplication process distinguishes the occurrence in focus position from the lower one. A set of languages finally show a closer case to Breton, with one of the two occurrences appearing with a tense markers, as in Portuguese, Spanish (69), Russian (70), Basque (54), Yiddish (Cable 2003), Classical or Modern Hebrew (71) and (72).

(67) **Đù** (% wɛ̀) Sɛ́ná **ə̀ù** blɛ́ə̀ì lɔ́.
eat FOC Sena eat bread DET
'Sena HAS EATEN bread.' *Gungbe*, (Aboh and Dyakonova 2008)

(68) **rírà** ni mo **ra** ìwé.
buy FOC 1SG buy books
'I BOUGHT the books.' *Yoruba*, Tamburri Watt (2003)

(69) **Comprar**, Juan ha **comprado** un libro !
buy, J. has bought a book
'Juan has bought a book !' *Spanish,* Vicente (2007)

(70) **Citat**, Ivan ee **citaet**.
read Ivan it read
'Ivan has read it.' *Russian,* Abels (2001)

(71) '**omr-** im '**aamoor** li- mna' ṣay. *Classical Hebrew*
say.benoni-3PL say to-despisers.1SG (Jeremiah 23:17)
'They say still unto them that despise me' cited in Harbour (2007)

(72) **liknot** et ha-praxim, hi **kanta**.
buy ACC DET-flowers, she bought
'She bought the flowers.' *Modern Hebrew*, Landau (2007)

The environment for doubling can be either pragmatic (restriction to negative contexts in Portuguese) or syntactic (restriction to perfect in Nupe). They can also be restricted to a given syntactic construction. In French, doubling like in (52) requires a preposition (that also requires doubling of the verbal arguments). In all the above languages, and inside the pragmatico syntactic environment that triggers doubling, doubling is fully productive: all verbs can double in a doubling configuration. The outstanding character of Breton verb doubling is its restriction to some *idiosyncratically restricted* list of verbs.

3.5. Scenarios for syntactic doubling

Due to some major turns in the theory, doubling has received several different formal analyses in the generativist paradigm during the last decades. The passage from trace theory

of movement, that was dominant in the 80-90ies, to copy theory, opened a boulevard of analysis for doubling effects in syntax. [16]
In trace theory (Chomsky 1973), a moved syntactic object exists under one and only one exemplary, because movement creates new elements in the derivation: phonologically null pronominal traces. The operation of verb-doubling in the syntactic component is perilous because each occurrence should then require its own arguments to pass the theta-criterion, contrary to typological evidence. In a trace theory T model, doubling can only be approached as a post-syntactic (morpho(phono)logic) operation. Copy theory (Chomsky 1955, 1993), reverses the perspective: each and all position in a movement chain are occupied by the same object (minor their (un)interpretable features). At the syntactic level, presence of multiple copies is no exception, but merely the symptom of movement, as sometimes revealed by pronunciation of multiple copies by the sensorimotor system. The sensorimotor system generally imposes pronunciation of the highest copy, and doubling can be obtained in the exact measure one can predict where the sensorimotor interface will be in a situation to send two copies to spell-out. Gouget (2008) for example poses that the complex movement of the verbal copy in Mandarin Chinese is particular in that it always obtains two copies that count as the highest one in the chain. Depending on the respective ordering of movement and cyclic transfer of the derivation to the interface, reduplication or simple movement is obtained. For verbal doubling in Nupe, Kandybowicz (2008) proposes that a tonal factitive morpheme calls for a realizational basis, obtaining that the realization of multiple verbal copies is associated with the factitive reading. Typological evidence for morphophonologically distinct occurrences can also easily be handled with: two copies in the same chain are already distinct at the syntactic level thanks to the encoding of the motivation for movement into (the interpretability of) feature specification.
Finally, in multidominance theory, two occurrences of a same chain are one and a same syntactic element and can only be differentiated when sent to the interfaces. Pronunciation of a copy/occurrence can be taken care of by a morphological operation like Morphological Fusion (see Nunes 2004 and Kandybowicz 2006a, b).

The paradigm of verbal doubling in Breton has a key importance in the debate. This paradigm has no equivalent in the doubling literature because of the lexical restriction imposed on it: only an arbitrary list of verbs can be doubled, irreducible to a homogeneous syntactic class, or to a syntactic operation. This means that whatever mechanism is invoked to account for verbal doubling in *gouzout a ouzon*, /to know I.know/, this mechanism must be set such as to apply to an arbitrary list of verbs, and only to this one.
I propose that both Breton analytic constructions are an instance of excorporation. At the morphological post-syntactic component, the structure is assigned material for later pronunciation. If the verb is idiosyncratically set such as allowing for double pronunciation, it can double. It also can excorporate and let a last resort 'do' insertion operation provide for morphological support for the affixes, as is the case with verbs that do not have the possibility to double anyway.
Idiosyncrasy provides a great insight into the organization of modularity, as it is the symptom of morphology, be it inside the lexicon, or post-syntactic realizational morphology. The Breton paradigm shows that doubling is realized in the latter module, because the distribution of both analytic constructions in doubling and with 'do' insertion are dependent on word order, the output of syntax. Once excorporation has been demonstrated to happen in post-syntactic morphology, the question of where repairs strategies are operated automatically follow. The *Stray Affix Filter* filtrates outputs where both inflexional morphemes and the

[16] For a clear and detailed presentation of the analysis of doubling verbs/structures, see Gouget (2008:chap3).

rannig Fin particle are pronounced alone. The repair strategy is to pronounce the lower copy of excorporation when available or to resort to 'do' insertion. The resulting information packaging structure can be flat, or carry *verum focus* in case of doubling.[17]

4. More arguments that excorporation is postsyntactic

This section investigates the question of where in grammar (syntax, morpho(phono)logical interface) is excorporation operated. I present additional arguments that excorporation is not in syntax, and arguments that it is not in phonology. I discuss some restrictions on the excorporation operation.

I conclude by presenting two other paradigms in the typologically independent languages Basque and Yimas that mirror the Breton paradigm at the level of the morphological word: excorporation arises internally to a morphologically complex word, in order to meet obligatory exponence on the left-hand side of the compound.

4.1. Not in syntax

Another argument that ACs are not internal to the syntactic module is that its trigger, LEIT, resists to the encoding under feature checking systems. LEIT, under different EPP-related names, has been proposed to be cast under different types of uninterpretable features: the phonological [P-] of Holmberg (2000) for Icelandic, the [δ] feature of Rezac (2004) or categorial [*u* CAT] in Jouitteau (2005) for Breton, the empty φ sets mentioned by Grohmann, Drury and Castillo (2000), the [-Foc] of Holmberg and Nikanne (2002) for Finnish, etc. The advantages of these feature-driven scenarios are that they accurately derive unselective locality (by Relativized Minimality), and blindness to the X/XP distinction. However, LEIT is an operation that does not exactly coincide with what we know of feature checking: **(A)** LEIT satisfaction does not seem to be ever possible at a distance. Instead, it is characterized by an ultralocal domain of impact, **(B)** LEIT effects are characterized by 'the long-sighted effect': in order to obtain unselective locality, feature checking accounts of LEIT need to postulate uninterpretable features that are present on the very head on which they are postulated. Feature-checking scenarios cannot avoid the stipulation that the uninterpretable feature is blind to the interpretable features of its own head (consisting of the inflected head itself or even the potential clitics that crosslinguistically fail to satisfy LEIT); **(C)** Lasnik's (2001) states that EPP can not be cast as a strong feature, and his argument holds for LEIT: provided that features can be checked by erasure of their satisfier inside an ellipsis (of VP or IP), VP ellipsis should allow for Tense-first orders in V2 languages, which is not the case. The merge of expletives is also a problem; and **(D)** Rezac (2004:481) notes that it would be "the (unique) feature whose Agree results in the Merge component of the Move operation, and in expletive base-generation".

Finally, another argument that LEIT does not operate in syntax is its recurrent violations of the Head Movement Constraint (past-participle fronting) and ban on excorporation (ACs in 'do'). No such filter as the Head Movement Constraint or any syntactic ban on excorporation is predicted to apply if LEIT operates out of the syntactic component.

The ban on excorporation at the syntactic level is active at the syntactic level. Breton has a restricted process of bare noun incorporation into a complex verbal head as in the infinitive in (73)a. The suffix *–eta*, 'look./for', selects an incorporated bare noun X as its goal, obtaining a verb meaning 'to look for X'. In (73)b, I show that excorporation of the bare noun by *wh* movement can not be rescued by a 'do' insertion, nor does the insertion of the nominal head

[17] See Kandybowicz (2008) for a similar paradigm in Nupe, where the lower copy of a doubling structure is pronounced in order to provide support for a floating low tone.

hini (similar to 'one' in English). The limited grammaticality of excorporation for *wh* feature checking in English syntax as in (74) is not available in Breton. No special accentuation or intention of joke can save excorporation in (73)b.

(73) a. Emaomp o vont da **arzh***eta*
are.1PL P go to bear-*look.for*
'We are going to hunt bears.'

/ b. * Petra emaomp o vont da ra-*eta* /hini-*eta*?
what are.1PL P go to 'do'/N.*look.for*
'What are we going to hunt?'

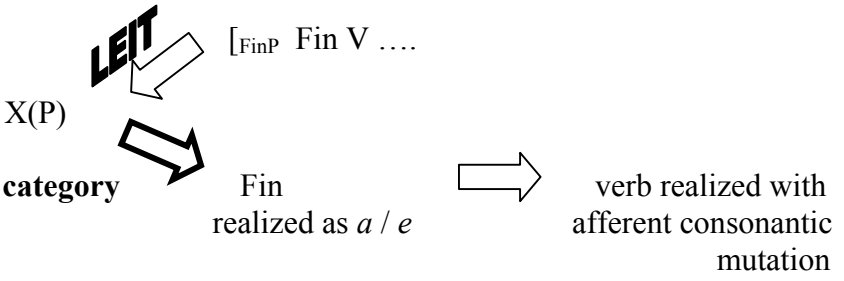
(74) I never know which *eeding* is which, *bl* or *f*. Do-Hee Jung, cited in Rezac (2004:1)

In (73)b syntactic excorporation has been achieved in syntax, forced by a *wh*-feature checking mechanism. The result is illicit because excorporation is not licit at this level of grammar.
The limits of excorporation in Breton strictly parallel that of its post-syntactic trigger, LEIT. Excorporation is consequently only observed in Breton from a tensed verbal root and never for incorporated nouns.

4.2. Not in phonology

The level where doubling arises can be shown to be sensitive to the [+/- nominal] distinction. In literary standard Breton and in the Leon dialect, the Fin head (so-called *rannig*) agrees in category with the +/- nominal pre-Tense element (Rezac 2004, Jouitteau 2005). The rannig is thus sensitive to the categorical identity of the fronted constituent, including LEIT fronted constituents. The causality chain of LEIT effects is schematized in (75). LEIT triggers last resort strategies when a tensed head fronts first in the Fin head at the end of the derivation, and calls for any head or bigger constituent to be Merged or Moved. The +/- nominal category of this pre-tense element will decide for the particular spell-out of the Fin head: *a* follows [+ nominal] elements, and *e* follows [- nominal] elements. It is not rare that the rannig *a/e* itself would not be spelled out, but its syntactic presence is discernable by the consonantic mutation it itself triggers on the following tensed element that right adjoined to it.

(75)



In doubling cases (as in ACs in general), the *rannig* appears under its *a* form that signals a [+ nominal] preceding element, which is logical in a language where untensed verbal structures show extensive nominal properties. The important point is that LEIT last resort operation is sensitive to the categorical identity of the element serving as an expletive[18].

4.3. Limits of excorporation

We can observe that even in the morphological component, excorporation is not an unrestricted operation. For a reason that remains unclear, proclitic arguments of the verb have to excorporate with their lexical verb. All dialects can make use of a reflexive proclitic that

[18] Note that this argument is solid, but could not hold in all dialects. All dialects do show the *a* variant of the rannig in doubling, but not all dialects follow the [+/- nominal] distinction for the *rannig*.

appears fronted with the excorporated material as in (76), and in the dialect where object pronouns procliticize, Gwened Breton, pronominal objects also front as part of the verbal complex head, as in (77). These pronominal arguments canonically appear procliticized on the left of an inflected verb. In case of excorporation, their appearing in their canonical position leads to complete ungrammaticality, they can not appear stranded on the left of the inflected compound (**plijout en em ra, *karet da ran*).

(76) [**En em blijout**] a ra o henti al lec'hiou distro.
REFLEXIVE please R do P haunt DET places solitary
'She likes to haunt the deserted places.' *Leon Breton*, Le Bozec (1933 :53)

(77) a. [**Daz caret]** a rañ _ . / b. [**Da garet]** a rañ _
2SG.OBL love R do.1SG 2SG.OBL love R do.1SG
'I love you.' *Gwened Breton*, Grégoire de Rostrenen (1795 : 179)

The same restriction is verified in doubling constructions, where proclitics can not be doubled. Proclitics can not appear stranded on the inflected item either: excorporation has to pied-pipe pronouns. This draws a sharp contrast between pronouns and agreement markers, which in the contrary have to remain *in-situ* and can not be pied-piped. I leave for here unexplained the restrictions on the type of material that excorporates. I note that this asymmetry between pronominal affixes and agreement markers provides an additional argument that excorporation is not as late as phonology.
The Breton paradigm is distinct from other crosslinguistic morphological reduplication processes. We can see the intervening rannig (and some short adverbs) between the two verbal heads. The closeness of the two verbal heads is thus more accurately described as ultralocality, and not adjacency. As pointed out by a reviewer, the excorporated verbal head does not show up with the mutation triggered by the rannig on its host.

4.4. A Morphological operation: obligatory exponence in morphology

The idea, suggested here, that LEIT effects such as excorporation could be crosslinguistically tied to morphology find independent crosslinguistic support in some well-documented morphological paradigms that strongly recall the LEIT signature. I will briefly present the case of obligatory exponence in the Basque morphology, where a second position phenomenon is identified at the level of a morphologically complex word.
Laka (1993) presents a case of obligatory exponence in the Basque verbal morphological complex. The obligatory exponent location prefaces the agreement complex, and is canonically realized by the absolutive marker, like *g-* in (78)a and b. The absolutive argument controls the prefacing exponent as long as it is first or second person. In cases the absolutive argument is third person, a Tense-Mood conditioned morphology fills in the gap as in (78)c. These prefixes, *d* (present), *z/Ø* (past), and *l* (irrealis), are last-resort defaults, meaning they are strictly restricted to contexts lacking and absolutive controller for the prefix.
In certain tenses however, no prefix is available, and the morphological complex shows ultralocal movement of the ergative marker into the prefix position like in (78)d, referred to as 'ergative displacement'. Finally, in these critical contexts where the prefix's morphology is exceptionally controlled by the ergative argument, and in some dialects, the ergative marker co-occurs in two different locations into the complex, leading to ergative doubling as in (78)e.

(78) **? -TM SG/PL √have ERG - past**

								½	
a.	Berak$_i$	**gu$_j$**	**g$_j$**	- a	- it$_j$	-u		
	He.ERG	us.ABS	1'		-PL			
	'He has us.'					ABS = ½ > ABS control		
b.	Berak$_i$	**gu$_j$**	**g$_j$**	–in	-t$_j$	-u		-en
	He.ERG	us.ABS	1'		-PL			
	'He had us.'					ABS = ½ > ABS control		
c.	Guk$_i$	hura/haiek$_j$	**D**		- Ø /it$_j$	-u	-gu$_i$	
	we.ERG	it/them.ABS					-1'	
	'We have it/them.'					No ½ ABS > Tense/Mood-conditioned morphology		
d.	**Guk$_i$**	hura/haiek$_j$	**g$_i$**	-en	-(Ø /it$_j$)	-u		-en
	we.ERG	it/them.ABS	1'					
	'We had it/them.'					In some tenses….. ABS = 3 > ERG ½ control ("displacement")		
e.	**Guk$_i$**	hura/haiek$_j$	**g$_i$**	-en	-(Ø /it$_j$)	-u	**-gu$_i$**	- n
	we.ERG	it/them.ABS	1'				-1'	
	'We had it/them.'					In these tenses in some dialects…. ABS = 3 > ERG ½ doubling		

The parallel with Breton LEIT effect is striking. Breton pre-Tense position is canonically filled in by some XP, in a manner prototypical of V2. LEIT last resort dimension is evidenced when no such XP is fronted. Merge of the Basque Tense-Mood conditioned prefixes strongly recalls the Breton *bez*/*bet* expletive strategy, where the used expletive is prototypically verbal (it is realized as a morphological shortening of the verb 'to be', and contains a [+/- past] encoding). Ergative displacement mimics LEIT ultralocal movement, and ergative doubling seemingly recalls verb-doubling.

As exposed in Rezac (2004), similar absolutive displacement paradigm showing morphological obligatory exponence shows up in Yimas (Papua New Guinea, Foley 1991, Phillips 1994). Phillips (1994) finds evidence for an EPP effect inside the verbal complex, and proposes this operation arises in morphology. Yimas verbal complex has a morphological surface ordering as in (79), where absolutive and ergative markers are agreement morphemes, and a pronoun, marked for nominative or accusative, can be incorporated closer to the root. Only one slot being available for incorporation, two direct arguments can compete for incorporation: the 'loser' being rejected in the periphery, marked for absolutive or ergative. Third person direct arguments automatically fail to incorporate and appear absolutive or ergative.

(79) C-system prefix - ABS-ERG- [NOM / ACC- √V] - Paucal - DAT –

This system shows an obligatory exponence effect: a left-located slot inside the agreement complex has to be filled by one of the heads of the C/T-system (81), (82) or an ABS prefix (83). As a last resort, the leftmost agreement prefix displaces and becomes absolutive as in (84) or (85).

(80)	**C**	**ABS**	**ERG**	**ACC/NOM**	**√ verb**	**T**	C
				½			AGR

(81)

Ka		-mpu	-~a	-tput	-n		
LIKE		3PL.ERG	1SG.ACC	hit	PRES		

'They are going to hit me.' C-head

(82)

ta	-pu		-n	-tpul	-c	-um	
NEG	3PL.ABS		2SG.NOM	hit	PERF	PL	

'You didn't hit them.' C-head

(83)

pu	**-**	-n		-tay			
3PL.ABS	-	3SG.ERG		see			

'He saw **them**.'

(84)

pu	**-**	-	-nan	-tay			
3PL.ABS	-	-	2SG.ACC	see			

'**They** saw you.' ERG > ABS

(85)

kapwa	**-**		-~kra	-tay			
2.DD.ABS	-		1.DD.ACC	see			

'**You two** saw us two.' NOM > ABS

Phillips (1994)
Foley (1991:195,198, 206, 226)

It is thus not very surprising to find a language like Breton with an obligatory exponence effect in a morphological module. The surprising, but, I argue, unavoidable conclusion from Breton, is that an edge sensitive morphological process similar to the head-internal second position phenomena exemplified above in Basque and Yimas is active *at the level of the sentence*, and leads to a generalization on word order. Recall that Breton, said to be a 'linear V2' language, has only word orders where at least an element, head or XP linearly precedes it. Excorporation is just one way among others to avoid tensed first orders.

On the one hand, we know of obligatory exponence cases in morphology (cf. Basque ergative displacement, Yimas morphological EPP), and on the other hand, we know of second position phenomena at the level of the sentence, for example V2 languages (Old Irish, Middle Welsh, Cornic, Breton, Medieval dialects of Northern Italian, Old French, Old Spanish, Rhaetoromance, Sorbian, Estonian, Kashmiri, Karitiana, Hebrew, Papago and almost all Germanic languages), but also clitic second languages (Warlpiri, Tagalog, Slavic languages, etc.). The present analysis of the Breton analytic structures leads to the major conclusion that there exist mixed systems, in which obligatory exponence operates at a level where a subject or an object with a potentially long relative embedded structure 'counts' the same as the excorporated subcomponent of a head for word order. This of course opens interesting perspectives for a unified understanding of second position effects across languages.

Conclusion(s)

I have shown that post-syntactic excorporation is evidenced even in cases of morphological amalgams.

Breton excorporation process is an ultralocal post-syntactic operation satisfying a *Late Expletive Insertion Trigger* at the interface. No excorporation operation is ever possible out of this context. This operation separates a lexical root and its potential clitics from the rannig proclitic and its inflection affixes. The excorporated element appears adjacent on the left of its

extraction site (above it if hierarchical structure is ever evidenced). The mysterious restriction of analytic structures to the respective […V-Aux…] order follows. The excorporated lexical root appears like an infinitive form that can be shortened like any pre-Tense infinitive verb in the language.
The very existence of doubling structures is one of the arguments that excorporation happens in a post-syntactic morphological component. The list of doubling verbs is arbitrary set, and does not form homogeneous syntactic classes: nothing distinguishes doubling verbs from non-doubling ones at the syntactic level. It follows that no scenario operating doubling in syntax can adapt to the Breton case. Theoretically, the hypothesis that doubling arises in a post-syntactic morphological component has the strong implication that doubling does exist crosslinguistically independently of either the copy theory of movement or multidominance.
In order to pass the *Stray Affix Filter*, the lower copy of the excorporated element can be pronounced for an idiosyncratically restricted set of verbs, creating verb doubling paradigms. In other cases, that is when a verb that could double but does not, or when a verb that can not double is excorporated, a 'do' support auxiliary independently available in the language is inserted. The choice of doubling a verb that can has an emphasis discourse effect.

The possible crosslinguistic availability of excorporation at the syntactic level remains a mystery. Moreover, if head movement itself is demonstrated to be a post-syntactic operation, one could wonder if all excorporation paradigms could not be send at the interface, and if the post-syntactic operation leading to Celtic V2 could not be adapted to Germanic V2. However, I have provided Breton examples for a contrast between post-syntactic excorporation (OK when triggered by *LEIT*) and syntactic excorporation (out, despite convenient material available to pass the *Stray Affix Filter*). Breton does allow for syntactic excorporation. It appears then that a deep difference sets apart the Breton and Germanic excorporation paradigms, a hypothesis which is confirmed by the fact that the idiosyncrasy we observe in Breton verb-doubling is never observed in Germanic verb-movement.

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